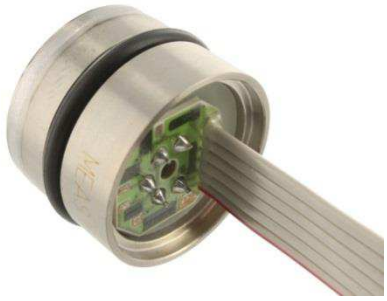


154BC

SPECIFICATIONS

- **Low Cost**
- **316L Stainless Steel or Titanium**
- **19mm Diameter Package**
- **0 - 100mV Output**
- **Gage and Absolute**
- **Wide Compensated Temperature Range**

FEATURES

- O-Ring Mount
- -20ºC to +85ºC Compensated Temperature
- 1.0% Interchangeable Span (provided by gain set resistor)
- Solid State Reliability
- ±0.3% Pressure Non Linearity
- Titanium Option

APPLICATIONS

- Medical Instruments (Dialysis Machines)
- Process Control
- Fresh, Waste, Salt and Brackish Water Measurements
- Refrigeration/Compressors
- Pressure Transmitters
- Hydraulic Controls

The 154BC is a 19mm small profile, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel or ASTM Grade 2 CP titanium housing. The 154BC is a low-cost unit designed without a header for O-ring mounting and OEM applications where compatibility with corrosive media is required. The titanium option offers greater resistance to corrosive materials and harsh cleaning chemicals, opening the range of its application use to things such as dialysis machines and salt/brackish water measurements.

The sensing package utilizes silicone oil to transfer pressure from either a 316L stainless steel or titanium diaphragm to the sensing element. A ceramic substrate is attached to the package that contains laser-trimmed resistors for temperature compensation and offset correction. An additional laser-trimmed resistor is included which can be used to adjust an external differential amplifier and provide span interchangeability to within ±1%.

Please refer to the 154N uncompensated and constant voltage datasheets for more information on different features of the 154.

STANDARD RANGES

Range (psi)	Gage	Range (Bar)	Absolute
0 to 015	•		
0 to 030	•		
0 to 050	•		
0 to 100	•	0 to 007	•
		0 to 012	•
		0 to 018	•
0 to 300	•		
		0 to 028	•

PERFORMANCE SPECIFICATIONS

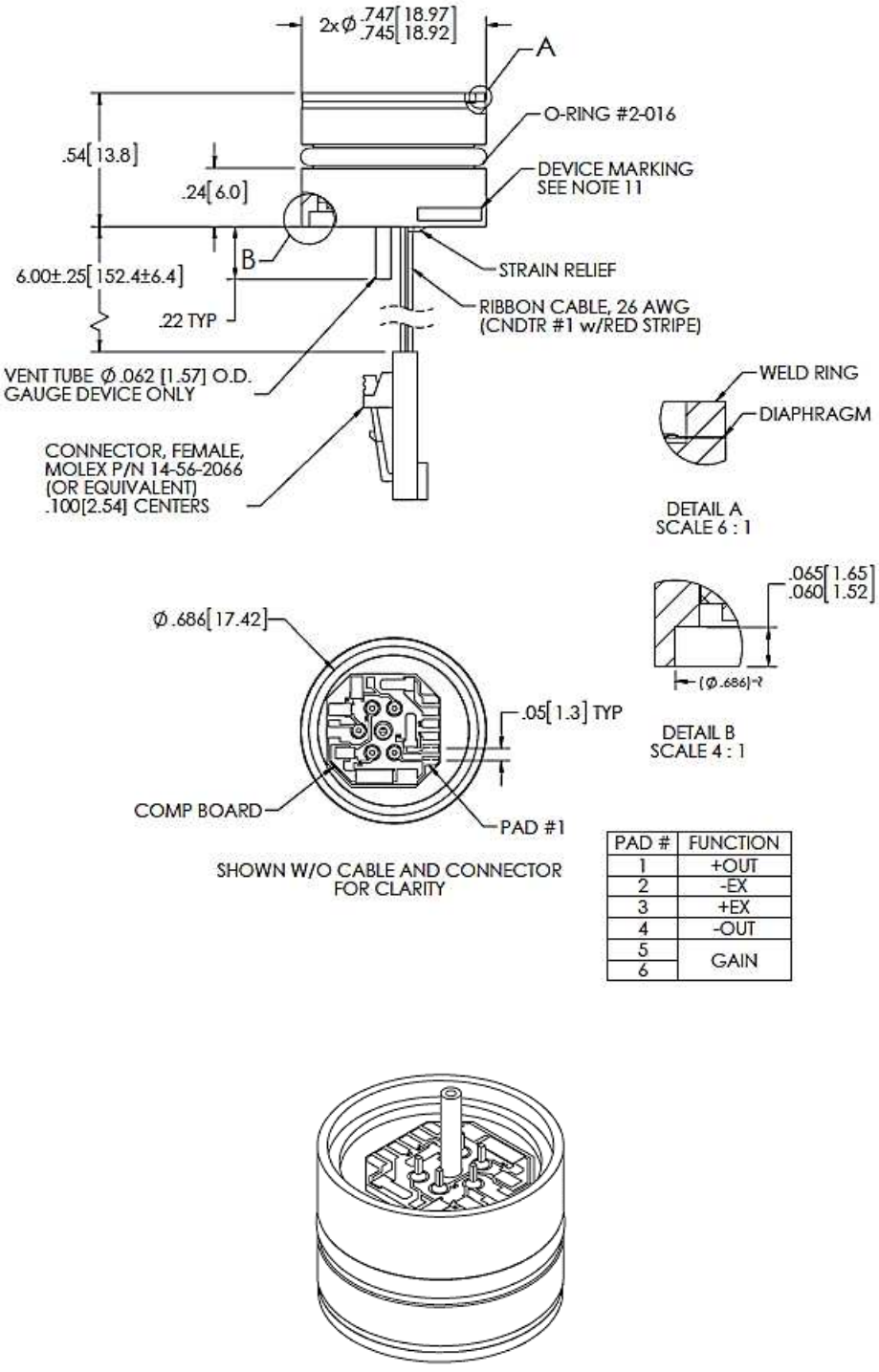
Unless otherwise specified: Supply Current: 1.5 mA, Ambient Temperature: 25°C

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span	75	100	150	mV	1
Zero Pressure Output	-1.0	0	1.0	mV	2
Pressure Non Linearity	-0.30		0.30	%Span	3
Pressure Hysteresis	-0.20		0.20	%Span	
Repeatability		±0.02		%Span	
Input Resistance	2.0	3.5	5.8	kΩ	3
Output Resistance	3.0		6.0	kΩ	
Temperature Error – Span	-1.0		1.0	%Span	4
Temperature Error – Offset	-1.0		1.0	%Span	4
Thermal Hysteresis – Span	-0.25	±0.05	0.25	%Span	4
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	%Span	4
Long Term Stability – Span		±0.10		%Span/Year	
Long Term Stability – Offset		±0.25		%Span/Year	
Supply Current	0.5	1.5	2.0	mA	5
Output Load Resistance	5			MΩ	6
Insulation Resistance ($50V_{DC}$)	50			MΩ	7
Output Noise (10Hz to 1kHz)		1.0		µV p-p	
Response Time (10% to 90%)		0.1		ms	
Overload Pressure			2X	Rated	8
Burst Pressure			3X	Rated	9
Compensated Temperature	-20		+85	°C	
Operating Temperature	-40		+125	ºC	10
Storage Temperature	-50		+125	ºC	10
Media – Pressure Port	Liquids and Gases compatible with 316L Stainless Steel or ASTM Grade 2 CP Titanium				

Notes

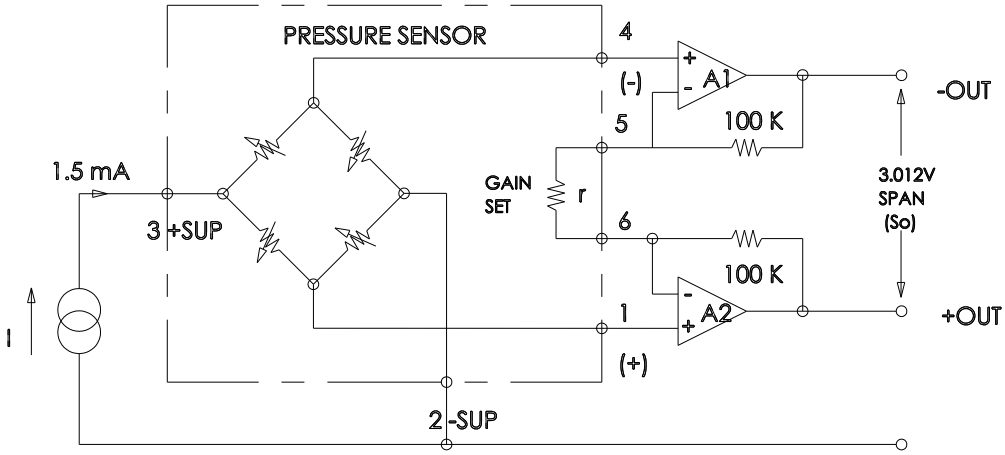
1. For amplified output circuits, 3.012V ±1% interchangeability with gain set resistor. See application schematic.
2. Measured at vacuum for absolute (A), ambient for gage (G).
3. Best fit straight line.
4. Over the compensated temperature range with respect to 25°C.
5. Guarantees output/input ratiometricity.
6. Load resistance to reduce measurement errors due to output loading.
7. Between case and sensing element.
8. 2X or 500psi, whichever is less. The maximum pressure that can be applied without changing the transducer's performance or accuracy.
9. 3X or 600psi, whichever is less. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.
10. Maximum temperature range for product with standard cable and connector is -20°C to +105°C.
11. Marking:
    Part marked with Model Number, Pressure Range, Type, Lot Number, Serial Number and Date Code
12. Shipping:
    The stainless steel diaphragm is protected by a plastic cap. Each unit will be packaged individually in a plastic vial with antistatic foam.

DIMENSIONS



PAD #	FUNCTION
1	+OUT
2	-EX
3	+EX
4	-OUT
5	GAIN
6	

APPLICATION SCHEMATIC



ORDERING INFORMATION

154BC – S – 300PG R

Material	
S	316L Stainless Steel
T	ASTM Grade 2 CP Ti

Electrical	
P	Solder Pads
R	Ribbon cable
C	Cable w/ Connector

Pressure Range [psi]	
015PG	007BA
030PG	012BA
050PG	018BA
100PG	028BA
300PG	

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